

MUST QUOTES

Leo Szilard: His Version of the Facts: Selected Recollections & Correspondence, Volume II, edited by Spencer R. Weart & Gertrud Weiss Szilard (Cambridge: MIT Press, 1978: 53). "Wigner told me of [Otto] Hahn's discovery. Hahn found that uranium breaks into two parts when it absorbs a neutron; this is the process which we call fission. When I heard this I saw immediately that these fragments, being heavier than corresponds to their change, must emit neutrons, and if enough neutrons are emitted in this fission process, then it should be, of course, possible to sustain a chain reaction. All the things which H. G. Wells predicted appeared suddenly real to me."

[54] "When I recovered I went to see [Isidor] Rabi, and Rabi told me that Fermi had similar ideas and that he talked about them in Washington. Fermi was not in, so I told Rabi to please talk to Fermi and say that these things ought to be kept secret because it's very likely that neutrons are emitted, this may lead to a chain reaction, and this may lead to the construction of bombs. So Rabi said he would and I went back home to bed in the King's Crown Hotel. A few days later I got up and went to see Rabi, and I said to him, "Did you talk to Fermi?" Rabi said, "Yes, I did." I said, "What did Fermi say?" Rabi said, "Fermi said "Nuts!" So I said, "Why did he say 'Nuts!'" and Rabi said, "Well, I don't know, but he is in and we can ask him." So we went over to Fermi's office, and Rabi said to Fermi, "Look Fermi, I told you what Szilard thought and you said 'Nuts?' and Szilard wants to know why you said 'Nuts!'" So Fermi said, "Well...there is the remote possibility that neutrons may be emitted in the fission of uranium and then of course perhaps a chain reaction can be made." Rabi said, "What do you mean by a remote possibility?" and Fermi said, "Well, ten per cent." Rabi said, "Ten per cent is not a remote possibility if I means that we may die of it. If I have pneumonia and the doctor tells me that there is a remote possibility that I might die, and it's ten per cent, I get excited about it."

[See also pp. 233-235].

[55] "[On March 3, 1939] everything was ready and all we had to do was turn a switch, lean back, and watch the screen of a television tube. If flashes of light appeared on the screen, that would mean that neutrons were emitted in the fission process of uranium and this in turn would mean that the large-scale liberation of atomic energy was just around the corner. We turned on the switch and we saw the flashes. We watched them for a little while and then we switched everything off and went home. That night there was very little doubt in my mind that the world was headed for grief."

From Herbert York's *The Advisors: Oppenheimer, Teller & the Superbomb* (1975), (ix) "This book is about...the development of the H-bomb, or the superbomb as it was then called. It is an especially important instance because it is one of the relatively few cases where those who explicitly tried to moderate the arms race came within shouting distance of doing so [emphasis added]."

but they didn't do it

(11-12) The main body of the [General Advisory Committee] GAC report [on the superbomb] makes a case for lowering as much as possible the barriers of secrecy that surrounded the whole process of deciding what to do about the super. This same please was echoed over and over in statements made by other scientists in this same context, and Oppenheimer returned to it often in subsequent articles and speeches. The committee recognized that certain technical details should be kept "secret," but they felt a very large part of what they were discussing could be made available without endangering the national security. They **obviously felt strongly that such momentous decisions affecting all mankind should not be made by a tiny elite in-group exclusively privy to all of the relevant facts**, even though in this case they were themselves included in it [emphasis added].

Gordon Dean, head of the AEC formerly (1950-53, succeeding Lilienthal): "There are those who believe that the principle objective of this generation should be peace at any price. {WHO? In 1957?] [peace by negotiation, or... For such people the capacity of the Russians to bring on an atomic holocaust should not be particularly disturbing since peace can always be secured—on Russian terms. But for most of us the mere survival of ourselves and our children is not sufficient. We think more in terms of surviving in freedom, and we believe that on this fast-shrinking globe our freedom is somehow bound up with the freedom of all of us, and particularly of those who have it today or are determined to have it someday."

Opening paragraph of his foreword to HAK, Nuclear Weapons and Foreign Policy. 1957

[enslavement vs. consideration—taking the risk—of nuclear war.

by mil. coercion

World enslavement was the aim of the Nazis, but not the capability or pursuit of the Soviets.

What did Trinity scientists have to gain by test?

a.i. was the first test of humanity: we now may have the capability to destroy the world: slowly, through an arms race, or instantly, with this test. (And they go ahead: at a time when there is no longer any prospect of Germany bomb or victory or Japanese bomb or failure to be defeated).

[what were the real objections to prolonged blockade of Japan?

[what was legal status of SU moves into Hungary? Or Czechoslovakia?]

The **threat** to our and world freedom from SU was regarded as equal to the threat from Hitler. (Legitimizing a threat from us that we had not made against Hitler, not having access to it.)

[War at any price. Threats at any price. Nuclear weapons at any price. US hegemony in Europe at any price. (requires German rearmament; Warsaw Pact nuclear buildup guaranteed).]

Separate German state, West Berlin, Taiwan, South Vietnam: all successes. World didn't blow up. (? What kept the SU out of northern Iran—Azerbaijan—except nuclear weapons?)

(see refs on northern Iran, TR, Trachtenberg argues in *A Constructed Peace* that the issue of war-scare over northern Iran was the trigger for the Cold War, not in Europe. P. 35, chapter 2, toward the Rubicon: Dispute over Iran and Turkey, see Edward Mark, diplomatic history.

Words to describe the scientists, and decision-makers: insane, mad, crazy (Pat: too bland, too ordinary); homicide (P: too abstract); maniacal; monstrous; Pat: war criminals? (conspiracy: to commit genocide, aggressive war, crime against the peace). Genocidaires. P: no good word.

K to British Ambassador at Bolshoi: "For 2.2 million (pop. of Berlin), 200 million (deaths)?" "Twenty warheads to destroy Britain and France." (no one responds to this sort of thing: And what then happens to the Soviet Union?)

(Like Sgt. Gibbs and Morlock in *The Kill Team*: they become dedicated serial murderers. Actually, literally: serial murderers. Like the Tiger Force in Vietnam. "Made men." Memories of their first "contact": exciting; adrenaline; what they signed up for, what they were trained for; like the movies, "Top Gun." (Danger Zone?))

Analogy: I suggest to DU Smith (lawyer): Like a sign on one's house, to deter burglars: This house is wired to blow up the block, if there is an unauthorized entry.

Or the house itself: with risk that flames will spread through the block. As in, I tell them, the case of MORE in Philadelphia, when mayor authorizes the use of bomb on the house, which spreads fire in the block.

Smith: A private pool—in a house at the top of an unstable hill—is leaking water. It is undermining the hill, with the likelihood that at some time, unpredictable, it will cause a landslide that will take away the houses below. "A court would order that the leak be fixed." (Though that's not a situation of deterrence).

But the existence of a Doomsday Machine implies a risk that it will explode, even though no "concrete evidence" of immediate and direct harm, or even definitely predictable harm within a given time.

(USG argument to dismiss the complaint of the Marshall Islanders. I suggest: Must the smoking gun evidence be a mushroom cloud?)

(See K's deployment of tac nucs to Cuba, with no intent to use them to deter, no intent to announce their presence. Just, in case of invasion, they would destroy the invasion force: and trigger the end of...Eurasian continent...actually, complex life on earth.)

Some other relevant quotes (though not "must quotes"): The Harvard Nuclear Study Group, *Living With Nuclear Weapons*, with a foreword by Derek Bok, President, Harvard University (1983: 247-249): "...in deterrence, our intentions are not to do evil. Our threat is intended to avoid both the horrible outcome of nuclear war and aggressive behavior by the other side. Our intent in making the threat is not immoral, and the consequences depend in part on the intentions of the other side. On the contrary, to remove the threat altogether—because it is evil to threaten to kill entire populations, or to threaten to attack military targets with weapons that are likely to be neither discriminating nor controllable—might indeed have disastrous moral effects, if it incites one's adversary to take greater risks, and thereby made war more likely.

While we differ with some details raised by the bishops' arguments about nuclear weapons, we are sympathetic to their overall conclusion that nuclear deterrence is morally tolerable as long as there is no acceptable alternative means to prevent a feared action and the intent is to avert the greater evil of nuclear war. We agree with the bishops that nuclear deterrence is only conditionally moral; the condition being that we make genuine efforts to reduce dependence on nuclear deterrence over the long run. To resort to deterrence in order to protect low stakes is a morally and politically nasty bluff. To resort to nuclear deterrence to protect high stakes makes political and moral sense only if the credibility of the threat is enhanced by the availability of non-nuclear weapons, which may make the actual execution of the threat unnecessary. ?

Those who disagree with this position would argue that deterrence implies some risk of nuclear war, and that nothing is worth nuclear war, particularly if it would end life on earth. This might be obvious if a breakdown of deterrence would really end life on earth. Trust in the existence of future generations pervades our daily life. We seek to preserve the environment, to save money, to raise children properly, all the time assuming that life will continue to exist. But a nuclear war between the superpowers today would most likely not end all human life on earth. A critical moral goal should be to avoid passing that awful moral threshold.

Of course that is not enough. The current inventory of 50,000 nuclear weapons could wreak indescribable devastation. Even if its use would not end human life, it would destroy the human society we now know and cherish. But that does not mean one could not imagine a moral use of nuclear weapons...imagine that the threat of that [tiny] risk helped to prevent large-scale conventional war that

causing it

would cost tens of millions of innocent lives as occurred in the second World War. Would it be immoral to rely on a small risk of nuclear war to avoid the higher probability of large-scale conventional war? We think not—so long as efforts are made to keep the risks as low as possible, and so long as one realizes that this is only an interim solution. A complacency that led one to relax about the dangers of relying on nuclear deterrence could become the source of great immorality."